

**TIMED DELAY FOR REDELIVERY OF TREATMENT THERAPY
FOR A MEDICAL DEVICE SYSTEM**

ABSTRACT OF THE INVENTION

Apparatus and method support a repetitive administration of a therapeutic treatment through a delivery unit during a neurological event, such as a seizure, of a nervous system disorder. The medical device system monitors signal data from a sensor and through an amplifier. A neurological event is detected by a medical device system using a detection algorithm. Consequently, a electrical stimulation pulse is applied to an electrode. During the delivery of the electrical stimulation pulse, the medical device system blanks signal data that is associated with the electrode. Subsequently, additional blanking is providing during a time interval in which signal artifacts may occur and the amplifier is stabilizing. The medical device system then collects signal data for the detection algorithm to stabilize. Subsequently, the medical device system collects additional signal data in order to obtain statistically meaningful data. If the medical device system detects a continuation of the seizure, therapeutic treatment continues.